

# ACTUARIAL NOTE

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## SMI BENEFIT EXPERIENCE FOR 1966-68 AS SHOWN ON PAYMENT RECORDS

By

Robert J. Myers

Office of the Actuary

This Actuarial Note will present an analysis of the tabulation of Supplementary Medical Insurance payment records in the 0.1% Actuarial Sample made for all such records processed through March 28, 1969. It should be recognized that there is a considerable filing and administrative lag present so that conclusive results can be drawn at this time only for the first 2 calendar years of the program (July 1966 through December 1967). Since the sample is a 0.1% one, approximate figures for the universe can be expressed by merely adding three zeros (although actually the sample seems to be understated by about 4% relatively insofar as benefit disbursements are concerned, of which about 1 $\frac{1}{4}$ % is due to under-representation of persons in the sample, and the remainder is due to a lower average per capita claims cost in the sample than the universe).

Payment records are prepared for all benefit reimbursements except for those to institutional providers of service (namely, hospitals, extended care facilities, and home health agencies) and for those to direct-dealing group practice prepayment plans, which are reimbursed on a reasonable-cost basis. Such institutions are reimbursed only for their own costs, and not for any costs for institution-based physicians. A payment record relates to the services provided by only one physician (or other provider of services) and can be for one or more services, just so long as they were furnished in the same calendar year. The data, therefore, are significantly

affected by whether the claimant (the provider in assignment cases and the enrollee in other cases) accumulates bills or whether he sends them in one at a time.

The available data indicate that in 1966, about 94.4% of the costs of the SMI program were paid on the basis of payment records, while for 1967, the proportion was 93.5%. However, this proportion is lower currently because of several changes made by the 1967 Amendments—namely (1) the transfer of the nonprofessional component of outpatient diagnostic services from HI to SMI, which is not reported on payment records; (2) the payment for the professional component of all outpatient services directly to the hospital for most hospitals, which is a shift from the former basis that required payment records in such cases; and (3) because of the payment for the professional component of inpatient pathology and radiology services through the HI program initially for the majority of hospitals (but eventually being paid by the SMI program), which, again, is a shift away from payment records.

Table 1 gives data, by month of last expense, for payment records for 1966—as to number, aggregate reasonable charges, and aggregate reimbursement amounts reported. Tables 2 and 3 give similar information for 1967 and 1968, respectively. It should be noted that the aggregate reported reasonable charges shown have been adjusted to include (a) the full amount of the outpatient psy-

chiatric charges up to the \$500 maximum "insurable" cost (outpatient psychiatric care is subject to 50% coinsurance—instead of 20%—and has a \$250 maximum annual reimbursement) and (b) charges that go to meet the deductible, but that do not do so completely and thus are not on any payment record.

For all years (although note that the 1968 data are as yet incomplete—especially the later months of the year), the number of payment records are lowest for the first few months, then level off, and finally rise sharply at the end of the year (especially in December). This trend results from the effect of the \$50 deductible and from the tendency of many individuals to accumulate small bills and submit them at the end of the year (or later). The same trend is, of course, also shown for the aggregate reasonable charges, and the aggregate reimbursement amounts.

The average reimbursement amount per payment record was \$50 for 1966, \$45 for 1967, and \$47 for 1968. This relatively level trend is somewhat surprising in view of the known secular rise in physician fees over the 2½-year period. It is probably explainable by changes in charge, billing, and claims-filing procedures. Within any year, the average does not show any particular trend by month, although a slight tendency for a lower average in the initial and final months seems to be present.

Table 4 shows the percentages of aggregate reasonable charges that are reimbursed under SMI according to these payment-record data, by month of last expense. Here, as a result of the \$50-deductible provision, there is a definite rising trend by month. For 1967 and 1968, the proportion begins at about 64% for the early months of the year and soon rises to a level of about 70% for the last half of the year. This proportion showed the same trend for 1966, but it was at a slightly lower level due to the more powerful effect of the \$50 deductible in that year (since it applied for a period of 6 months, instead of 12 months, as subsequently).

Table 5 compares the aggregate reimbursement amounts by month of last expense by

calendar years with the average enrollment so as to yield the average reimbursement per capita. Such average reimbursement was \$4.12 for 1966, \$5.56 for 1967, and \$4.80 for 1968 (the latter figure, of course, being low because by no means all the data for that year have yet been reported). For the sake of accuracy, it is necessary to make the analysis by calendar years, since each payment record refers to services in a particular calendar year. Data for the period July 1966 through March 1968, when the standard premium rate was \$3, would not be precise, because many payment records with month of last expense after March 1968 include expenses incurred earlier.

The fact that the per capita average for all periods was below the \$6 income from the premium rate and from the matching government contribution that were in effect during July 1966-March 1968 and the \$8 income thereafter is not necessarily indicative of the adequacy of the premium rates. The following considerations must also be taken into account in judging the adequacy of the premium rate:

- (1) A considerable number of payment records covering benefits that have already been paid have not been submitted by the carriers.
- (2) Carriers have received claims which have not been adjudicated yet.
- (3) There are substantial amounts of potential claims outstanding for services rendered, for which no claim has yet been submitted to carriers. Some of these will be filed in connection with later claims.
- (4) The .1% sample is subject to statistical fluctuations.
- (5) Benefit payments not included on payment records are 5.6% of total benefit payments.
- (6) Administrative expenses must also be paid out of the premium rate and the matching government contribution.

The first three items will affect the later months greatly and the earlier months only slightly.

Table 1  
DATA FOR 1966 PAYMENT RECORDS PROCESSED THROUGH  
MARCH 1969, ACTUARIAL SAMPLE

<u>Month of Last Expense</u>	<u>Number of Records</u>	<u>Aggregate Reasonable Charges <sup>a</sup></u>	<u>Aggregate Reimbursement Amounts</u>	<u>Average Reimbursement Amount</u>
July	791	\$62,681	\$38,242	\$48
August	980	79,477	50,375	51
September	1,246	108,834	71,431	57
October	1,609	122,545	78,374	49
November	1,667	125,795	82,034	49
December	2,550	184,937	117,459	46
Total	8,843	684,269	437,915	50

<sup>a</sup> Including full amount of outpatient psychiatric charges. Also includes charges not shown on payment records for persons who have satisfied the deductible and who have some reimbursements made on a payment record. Excludes any charges made by providers of services that were determined to be in excess of the "reasonable charge".

Table 2  
DATA FOR 1967 PAYMENT RECORDS PROCESSED THROUGH  
MARCH 1969, ACTUARIAL SAMPLE

<u>Month of Last Expense</u>	<u>Number of Records</u>	<u>Aggregate Reasonable Charges <sup>a</sup></u>	<u>Aggregate Reimbursement Amounts</u>	<u>Average Reimbursement Amount</u>
January	1,494	\$99,166	\$63,014	\$42
February	1,474	105,819	67,645	46
March	1,763	130,630	86,838	49
April	1,821	129,733	85,663	47
May	1,977	134,651	91,048	46
June	2,129	148,479	100,985	47
July	2,018	128,400	88,956	44
August	2,174	127,986	88,271	41
September	2,287	140,320	97,374	43
October	3,022	188,715	129,932	43
November	2,917	177,950	125,327	43
December	3,685	239,452	166,662	45
Total	26,761	1,751,301	1,191,715	45

<sup>a</sup> Including full amount of outpatient psychiatric charges. Also includes charges not shown on payment records for persons who have satisfied the deductible and who have some reimbursements made on a payment record. Excludes any charges made by providers of services that were determined to be in excess of the "reasonable charge".

Table 3  
DATA FOR 1968 PAYMENT RECORDS PROCESSED THROUGH  
MARCH 1969, ACTUARIAL SAMPLE

<u>Month of Last Expense</u>	<u>Number of Records</u>	<u>Aggregate Reasonable Charges <sup>a</sup></u>	<u>Aggregate Reimbursement Amounts</u>	<u>Average Reimbursement Amount</u>
January	1,532	\$99,074	\$60,648	\$40
February	1,619	120,996	77,094	48
March	1,859	133,263	85,633	46
April	1,852	133,368	88,727	48
May	2,018	155,900	105,937	52
June	1,913	140,490	95,754	50
July	2,035	141,447	98,692	48
August	1,951	127,984	89,407	46
September	2,011	140,088	98,603	49
October	2,040	134,533	94,749	46
November	1,804	107,024	74,986	42
December	2,097	136,811	93,593	45
Total	22,731	1,570,978	1,063,823	47

<sup>a</sup> Including full amount of outpatient psychiatric charges. Also includes charges not shown on payment records for persons who have satisfied the deductible and who have some reimbursements made on a payment record. Excludes any charges made by providers of services that were determined to be in excess of the "reasonable charge".

Note: These data are by no means yet complete, especially for the last months of the year.

Table 4

PERCENTAGES OF AGGREGATE  
REASONABLE CHARGES THAT ARE  
REIMBURSED, ACCORDING TO PAYMENT  
RECORD DATA, ACTUARIAL SAMPLE

<u>Month</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>
January	*	64%	61%
February	*	64	64
March	*	66	64
April	*	66	67
May	*	68	68
June	*	68	68
July	61%	69	70
August	63	69	70
September	66	69	70
October	64	69	70
November	65	70	70
December	64	70	68
Total	64	68	68

\* Not applicable.

Table 5

COMPARISON OF AGGREGATE REIMBURSEMENT AMOUNTS ON PAYMENT RECORDS  
PROCESSED 3/28/69 WITH POPULATION PROTECTED,  
BY MONTH OF LAST EXPENSE, BASED ON ACTUARIAL SAMPLE  
(Enrollment and reimbursement amounts in thousands)

<u>Month of Last Expense</u>	<u>Average Population protected at Beginning of Month</u>	<u>Aggregate Reimbursement Amounts</u>	<u>Average Monthly Reimbursement Per Capita</u>
July 1966-December 1966	17,725	\$437,915	\$4.12
January 1967-December 1967	17,868	1,191,715	5.56
January 1968-December 1968	18,478	1,063,823	4.80
July 1966-December 1968	18,083	2,693,453	4.96